SANTA CRUZ BIOTECHNOLOGY, INC.

MDGA1 siRNA (h): sc-95567

BACKGROUND

MDGA1 (MAM domain-containing glycosylphosphatidylinositol anchor protein 1), also known as GMIM (GPI and MAM protein), glycosylphosphatidylinositol-MAM or MAMDC3 (MAM domain-containing protein 3), is a 955 amino acid protein that plays an essential role in cortical neuron migration in the neocortex. Expressed in kidney, brain, skeletal muscle, heart and tumor tissue, MDGA1 localizes to the cell membrane as a GPI- and lipid-anchor. MDGA1 exists as two alternatively spliced isoforms and contains one Fibronectin type-III domain, a MAM domain and six Ig-like (immunoglobulin-like) domains. The gene encoding MDGA1 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MDGA1 (human) mapping to 6p21.2.

PRODUCT

MDGA1 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MDGA1 shRNA Plasmid (h): sc-95567-SH and MDGA1 shRNA (h) Lentiviral Particles: sc-95567-V as alternate gene silencing products.

For independent verification of MDGA1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-95567A, sc-95567B and sc-95567C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MDGA1 siRNA (h) is recommended for the inhibition of MDGA1 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MDGA1 gene expression knockdown using RT-PCR Primer: MDGA1 (h)-PR: sc-95567-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.